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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/876,896	06/06/2001	Arogyaswami J. Paulraj	GW1-101/CON	8146

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EXAMINER
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LIU, SHUWANG

ART UNIT	PAPER NUMBER
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2634

DATE MAILED: 08/02/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

09/876,896

**Applicant(s)**

PAULRAJ ET AL.

**Examiner**

Shuwang Liu

**Art Unit**

2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 June 2001.  
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.  
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.  
4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.  
6) ☒ Claim(s) 1-14 is/are rejected.  
7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.  
8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☒ The specification is objected to by the Examiner.  
10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some \* c) ☐ None of:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)  
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)  
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 3.  
4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.  
5) ☐ Notice of Informal Patent Application (PTO-152)  
6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Specification***

1. The disclosure is objected to because of the following informalities:

The examiner suggests updating status of the cited applications, for example, page 1, line 15, insert US Patent 6,377,636, after the application number.

Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this

Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Omura (Patent Number 5,235,615).

(1) regarding claims 1-2, 5 and 7:

Omura discloses in column 2, lines 10-63 and column 5, line 4 to column 6, line 15, a method and communication system having at least a first transmitter (for example, 114 in figure 1), a second transmitter ( 113), and a receiver (110) located within a coverage area, comprising:

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determining a time delay between reception at a predetermined point (110) in the coverage area of a first signal transmitted from 114 to 110 and a second signal transmitted from 113 to 114 at a same frequency; and

introducing a transmission delay (see abstract) between the transmission of the first signal and the transmission the second signal such that the first signal and the second signal are received coherently (simultaneously) at the predetermined point 110, whereby the first signal and the second signal are received substantially coherently (simultaneously) by the receiver, thereby aiding in interference mitigation (column 1, lines 15-49).

(2) regarding claims 3, 4 and 8:

wherein, the predetermined by ranging (distance) (column 6, lines 1-6) and a sector of a cell is inherent located in the coverage area.

(3) regarding claim 6:

further the system is CDMA or FDMA which selected from a group consisting of TDMA, CDMA, FDMA and OFDMA (column 3, line 60-column 4, line 12).

4. Claims 1, 2 and 4-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Teder et al. (Patent Number 5,828,659).

(1) regarding claims 1-2, 5 and 7:

AS shown in figures figures 2-5, Teder et al. discloses a method and communication system having at least a first transmitter (BS1), a second

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transmitter (BS2), and a receiver (MS) located within a coverage area,  
comprising:

determining a time delay between reception at a predetermined point (MS)  
in the coverage area of a first signal transmitted from BS1 to MS and a second  
signal transmitted from BS2 to MS at a same frequency (column 4, lines 28-43);  
and

introducing a transmission delay between the transmission of the first  
signal and the transmission the second signal such that the first signal and the  
second signal are received coherently at the predetermined point, whereby the  
first signal and the second signal are received substantially coherently by the  
receiver, thereby aiding in interference mitigation (column 1, lines 55-61, column  
13, lines 46-67, column 7, lines 20-45, column 8, lines 9-16 and claim 1).

(2) regarding claims 4 and 8:

wherein, the predetermined by ranging (distance) (column 6, lines 1-6)  
and a sector of a cell is inherent located in the coverage area.

(3) regarding claim 6:

further the system is CDMA or FDMA which selected from a group  
consisting of TDMA, CDMA, FDMA and OFDMA (column 1, lines 8-67).

### ***Double Patenting***

5. The nonstatutory double patenting rejection is based on a judicially  
created doctrine grounded in public policy (a policy reflected in the statute) so as  
to prevent the unjustified or improper timewise extension of the "right to exclude"  
granted by a patent and to prevent possible harassment by multiple assignees.  
See *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re*

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*Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and, *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent is shown to be commonly owned with this application. See 37 CFR 1.130(b).

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

6. Claims 1-14 are rejected under the judicially created doctrine of double patenting over claims 1-48 of U. S. Patent No. 6,377,636 since the claims, if allowed, would improperly extend the "right to exclude" already granted in the patent.

The subject matter claimed in the instant application is fully disclosed in the patent and is covered by the patent since the patent and the application are claiming common subject matter, for example in claims 1, 5 and 7, as follows:

determining a time delay between reception at a predetermined point in the coverage area of a first signal transmitted from the first transmitter and a second signal transmitted from the second transmitter at a same frequency; and

introducing a transmission delay between the transmission of the first signal and the transmission the second signal such that the first signal and the second signal are received coherently at the predetermined point, whereby the first signal and the second signal are received substantially coherently by the receiver, thereby aiding in interference mitigation. For example, claims 12-14 of the application have common subject matter of claims 40-48 of the patent.

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***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Shuwang Liu whose telephone number is (703) 308-9556.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin, can be reached at (703) 305-4714.

**Any response to this action should be mailed to:**

Commissioner of Patents and Trademarks

Washington, D.C. 20231

**or faxed to:**

**(703) 872-9306 (for Technology Center 2600 only)**

Hand-delivered responses should be brought to Crystal Park II, 2121

Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology Center 2600 Customer Service Office whose telephone number is (703) 306-0377.



Shuwang Liu  
Primary Examiner  
Art Unit 2634

July 16, 2004